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AUTHOR Goldberg, David
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ABSTRACT

This research report examines the components of modernity that deal with women's roles and values and their impact on fertility rates. The life style identified as modern is clearly multidimensional, yet three items -- power, segregation, and containment -- are chosen to study the fertility rates. The hypothesis is that in a family in which the husband makes the decisions (power), in which the wife's attitudes reflect perceptions of a highly differentiated set of sex roles (segregation), and in which the husband restricts the wife's activities (containment), then there will be high fertility due to the limited number of alternatives to the mother role. Data were collected in Ankara, Turkey in 1966 and Mexico City in 1971 by a 300 item questionnaire. The results support the hypothesis. Included in the study are tables indicating frequency distributions for individual questions, and the relationship between cultural background, modernism concepts, and fertility. (Author/DE)

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Modernism: The Extensiveness of Women's Roles and Attitudes

Prepared by

DAVID GOLDBERG

Population Studies Center
The University of Michigan

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Modernism: The Extensiveness of Women's Roles and Attitudes

Introduction

It would be best to describe some of the writer's personal orientations or observations before embarking on the topic of modernism.

1. There has been an explosion of speculation and research on modernism during the past twenty years. Most of these studies are filed under the topics of social change or development. The topic is implicitly approached in almost all comparative studies and entire journals are devoted to it. This occasional paper does not attempt to capture the full range of materials.

2. Modernism is studied at the macro (society, community, neighborhood) level and at the individual level but this paper focuses entirely on the latter. The potential contribution of local area variations in structural or organizational features, to explanations of fertility, is covered elsewhere.* The task here is to produce a set of questions that can be administered relatively easily and quickly, and that will lead to a fuller explanation of fertility behavior.

3. There is no reason why a potential user of modernism items should accept and utilize some of them unless he has explicit evidence of their relevance. To request "faith" along lines that follow traditional speculative scholarly interests for a modernism module strikes this writer as a most inappropriate combination. Therefore, this occasional paper presents substantial numbers of tables showing relationships between some components of modernism and fertility, assuring the reader an opportunity to test the product before attempting to use any part of it.

4. Modernization is a process, the end point of interest here being fertility behavior and values. The beginnings of the process are the instruments of change, the preconditions leading to a life style made up of components that form a loose system. This life style has implications for fertility jointly with the preconditions and independent of the preconditions but this

* Occasional Paper No. 8, "Community-Level Data in Fertility Surveys" by Ronald Freedman; Occasional Paper No. 9, "Examples of Community-Level Questionnaires from Sample Surveys about Fertility" by Ronald Freedman.

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paper emphasizes only selected components of those life style items. It takes the preconditions into account, but in no way attempts to dwell on their details.

5. Strong biases about styles of interviewing are reflected in the materials that follow:

a. Incremental field costs of an interview lasting perhaps ten minutes more than a fixed amount of time (let us say by the basic WFS questionnaire) are relatively small. However, other costs involving coding, punching, or analyzing data should be evaluated relative to the contribution the incremental questions make to the explanation of fertility. In this instance, it can be demonstrated that the contributions are large.

b. The final interview situation is not the time to experiment with questions, to probe deeply, to ask the respondent to do the researcher's work by asking him to tell us why he behaved the way he did, to attempt to record every nuance. Instead, a form should be used that maximizes the amount of information and minimizes interviewer freedom. The form of questions should be conversational but the response pattern should be closed, using open ended questions only to give the process a more "natural" flow and rhythm.

c. Given a. and b., the use of these proposed module materials should be strongly encouraged for at least two reasons: 1. It comes at little expense to the potential user. 2. It can distinguish the WFS research effort from previous "KAP" efforts along theoretical lines or along lines of developing policy strategies in local areas.

What is Modernism?

There appears to be no consensus on the meaning of the term other than the fact that it refers to a process in which the independent variables are things like place of birth, education, perhaps status, and the end of the process – the dependent variables – is a set of values and behavior that shape a style of life. In fact, in several studies, part of the "modern" life style is defined as low fertility or the use of family limitation.

From the standpont of the WFS, it is appropriate to view the modernism process as a three stage causal chain:

Background → Modernism → Fertility

The first stage (including items like place of birth, education) and the last stage are automatically included in the basic WFS questionnaire. The task at hand is to develop a subset of items from the vast array of materials included in the varied descriptions of modern life style *and* to demonstrate that they have an impact on fertility independent of the background items. If modernism items cannot be shown to have an independent effect on fertility then there is obviously no point in using them as intervening variables. The life style identified as modern is clearly multidimensional and may lack system features such as high intercorrelations among the dimensions. We note that sectors of society modernize at different rates. Similarly, we note uneven modernization for an individual. The use of the term "uneven"

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may simply reflect our inability to deal with the multidimensionality of the problem. If the literature on "making men modern" is examined, any or all of the following dimensions are used to describe the process of passing from traditional to modern:

*from – containment to emancipation**
- *extended family to nuclear family*
- *limited environment to extended environment*
- *local to cosmopolitan*
- *fatalism to efficacy*
- *passivity to achievement orientation*
- *tradition bound to mobile sensitivity*
- *dependence on traditional authority to growing independence of traditional authority (family, church, etc.)*
- *closed to open*
- *ascription to achievement*
- *dominant male values to egalitarian values*
- *economic functions in the home to economic functions out of the home*

The range of questions used in scales of modernity is incredibly long. Some examples follow:

A man comes to the barrio selling medicine for pigs. Should Karya, a resident of the barrio, buy some for her pigs or wait until her neighbors try it?
Schools spend too much time on book-work and not enough on teaching useful things.
The new things being invented do as much harm as good.
God only helps those who help themselves.
Which is most important for the future of this country: hard work, good planning, God's help, good luck?
Would you give most weight to the advice of: church, government?
Would you treat a stranger with trust, caution or distrust?
Should a man choose a job preferred by himself or his parents?

The most distressing feature of the research on modernism is the demonstrable fact that modernism has about as many meanings as there are researchers on the topic. In addition, what is defined as modern for setting A may not be modern for setting B. Clearly, for the purposes of a module, we must select some part of the modernity indexes that will have a direct bearing on fertility. Here we deal only with those components of modernity that deal with the extensiveness of women's roles and values.
In the list of characteristics (above) we find overlapping references to the division of labor (activities) between the nuclear family and the world outside the nuclear family, as well as the balance of power activity or interaction within the family. This serves as a convenient reference point in dealing with an even longer list of values and behavior subsumed under the term,

* In the language or jargon of the researchers dealing with the concept.

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modernism. It is not argued that one's relationship to the church or one's feeling about chance events and planned events is irrelevant, rather that we can most efficiently capture the central themes of modernism, relevant for fertility, by focussing on the family. Whatever list we confront, the modern is described as someone whose world is broader, whose sensitivities to that broader world are greater, whose identification, involvement, and attachment to the heterogeneity of a wider environment produces more *alternatives* to a traditionally defined existence. When this is translated to fertility, it means that the "modern person" will have lower fertility because of the potentially competing demands of alternatives.

Economists, who have recently become involved with the fertility problem, are inclined to call this form of potential competition "the opportunity cost of children" – this, only after having "discovered" that the net relationship between income and fertility will most certainly be modest and its direction virtually unpredictable. The concept of children as consumer durables has limited truth value for a mother. Unfortunately, economists define the time cost of children as the "money value" of time devoted to them. Money value is translated as time multiplied by the probable wage rate per unit time for the mother who *could*, *would*, or has the *potential* for earning at a given rate. This is no more or less than a highly parochial misstatement of the problem. Their world is very narrow. They leave no room for the woman with many competing alternative desires but lacking educational or labor force experiences that are easily translatable to time-dollars. Aren't time-dollars or work status (which is contained in the basic WFS questionnaire) simply a conventional means of describing a sub-set of the alternatives?

Narrowing Down the Problem

Residence, education, and income typically serve as the starting point in describing the fertility process. We would be puzzled if we encountered data that failed to reveal differences in fertility associated with those variables. The same variables serve as the starting point, the preconditions for the process of modernism. When researchers ask how community background or education or income get translated into fertility differentials, the answers they usually give to themselves are: kinship pressure or sustenance, the locus of female activities, segregation of male and female roles, consumption preferences. In sum, they delineate a set of alternatives to the mother role that could compete for her time and energy, or a set of activities or preferences that could sustain or reinforce the mother role. In combination they can be viewed as the extent, the width, of the woman's horizon. These ideas have been expressed for literally centuries. They are expressed in behavioral terms and in psychological terms. Education for what? Education, by design, makes people aware of alternatives. Income? It allows us to participate in a range of activities that can compete with the demands associated with childbearing as well as be in a better position to handle children as consumer durables – the former generally outweighing the latter.

We can capture the thrust of this intervening modernism variable of role densities, without an elaborate time budget study, by concentrating our efforts on a very limited number of

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dimensions. The items selected from the multifaceted modernism are *power*, *segregation*, and *containment*. The implicit hypotheses are old. If we find a family in which the husband makes the decisions (power), in which the wife's attitudes reflect perceptions of a highly differentiated set of sex roles (segregation), and in which the husband restricts the wife's activities or the wife fails to participate in roles outside the home (containment), then we would predict high fertility because there is a very limited density of roles or preferences that function as alternatives to the mother role. As the range of alternatives becomes broader – he has less authority, the relationship is more egalitarian, sex role distinctions are less pronounced, and with her greater freedom she selects childcare-competing activities – fertility declines.

A few points should be made explicitly:

1. This facet of modernism is treated as the variable intervening between the background characteristics and fertility. This implies that extensiveness of the wife's role is correlated with the background variables and fertility, and has a net effect on fertility, independent of the background variables.

2. The correlation and net effect conditions stated in point 1 imply that manipulation of the instruments of change in the modernization process (background characteristics plus other variables treated as input to the process) reverberate through the intervening variable to fertility. This is particularly important for policy to the extent that the modernism items themselves are not directly manipulable.

3. The dimensions of modernism that have been selected are consistent with fertility "theory", in so far as it exists, and help bridge the theoretical-psychological gap that exists whenever relationships are reported between the background characteristics and fertility.

What is the Nature of the Evidence for the Argument?

Commitment to a set or sub-set of questions should be based on firm evidence demonstrating their utility. We no longer consider whether to ask questions about education or residence in a fertility study as we *know*, through repeated demonstration, that they do have utility. Although we cannot supply a range of evidence showing that the dimensions selected work across most cultures at most levels of development, we can supply systematic and comparable evidence taken from two research settings – Ankara, Turkey and Mexico City.

The tables are designed to answer the following questions:

1. What kinds of frequency distributions are obtained for the individual items? (Tables 1–4)

2. What are the relationships between each question and measures of fertility? (Tables 5–8)

3. What gross (zero order) relationships exist between crude indexes of the dimensions of modernism, background variables, and fertility? (Tables 9–12)

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4. How does the process of modernization decompose into net effects on fertility from the component indexes and the background variables? (Tables 13–15)

5. How do some of the other variables mentioned by researchers fit into the modernization process? (Table 16)

Presuming an interest in these items, an appendix provides the English translation of the questions used in Ankara and Mexico City, their relative placement in the schedule, and the time consumed in asking the questions.

Data were collected in Ankara in 1966 and this was followed by a comparable study in Mexico City in 1971. Both studies were sponsored by the Population Council, their purpose being the exploration of modernization and the demographic process, a somewhat wider objective than the one here. This can best be described by reference to the size of the schedule. About 300 questions were contained in each – an average interview time of about one hour. There are less than 25 modernism questions used in Tables 1–15, showing the power, segregation, and containment items. These items, or comparable ones, would consume 4 to 7 minutes of interview time, depending on the interviewer style. Additional types of questions relating to other frequently used components of modernism are given in Table 16 and the appendix.

A probability sample was drawn in the rough equivalent of the urbanized area of each city. Eligible households were those containing a married couple and eligible respondents were wives. About 800 interviews were taken in each city. Interviewers received about 4–5 hours of formal training and took two or three practice interviews that were heavily edited and discussed before entering the field. Editing, interviewer checks at respondent households, sending interviewers back to the household if the schedule was not properly completed, and discussions with interviewers continued *throughout* the period of interviewing. Interviewers were skeptical about the possibilities of collecting such "private" information, however, the overwhelming majority of respondents welcomed the opportunity to "discuss" these matters. In spite of the continuous interviewer surveillance, it is now apparent that there are clear interviewer "effects". It would seem that most of these "effects" stem from two sources: 1. a tendency on the part of some interviewers to lighten their load by occasionally asking the first few questions in a series and filling in the remaining responses themselves, and 2. an occasional case of an interviewer being reluctant to ask a few items, filling in invented responses and obtaining response patterns showing an interviewer "effect" well above or below expected values.

To summarize, what we have to offer are two sets of comparably collected data subject to all the failings of the survey instrument. The individual questions and indexes selected for presentation (Tables 1–15) are some of the more successful predictors of fertility in a much larger set of materials.

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How Can Data from Ankara and Mexico City be Evaluated with Reference to Country X?

Since both cities have experienced exceptionally rapid growth, being fed by communities lower in the urban hierarchy, and, since both cities are national capitals with large numbers of white collar workers, it is fairly safe to assume that the data obtained probably come close to maximizing variance on independent and dependent variables. This probably helps produce relatively high intercorrelations among variables. One should not expect comparable correlations in situations where the variance in life styles is smaller. Lower variance and lower intercorrelations will probably be obtained in the rural populations of transitional societies, in pre-transition societies, and possibly in the most "advanced" societies. One would speculate that data of the kind presented here are most appropriate for countries in the per capita income range of 300–400 dollars to 1,000–1,300 dollars. However, these comments are entirely speculative and impressionistic, so let us turn to data.

The Data (Tables 1–4)

Each table in this section displays the frequency distributions for the individual questions used to generate the several indexes representing the selected dimensions of modernism. All of the questions on modernism were asked after a rather long section of the interview schedule dealing with extended family interactions. Typically, respondents were answering these questions about 20 minutes after the interviewing started.

The list of decision making items given in Table 1 is arbitrary, following a format used in U.S. studies, as we were trying to obtain a generalized indicator of power. The reader should note that the question itself excluded the middle response, "both," to avoid piling up cases in that category. Interviewers, however, had a five point response category to check.

The sex role segregation attitude items are shown in Table 2. The format of the question again excludes the middle response but the interviewers had an "undecided, don't know," category to check (these are the small number of "intermediate" responses shown in the table). In Turkey, there is a rather well known proverb about women marrying drummers or pipers (perceived as exceptionally low status) if their marriage choices are not guided. This is simply an example of variation that can be built into the series as a function of cultural differences.

The containment items are given in Tables 3.1, 3.2, and 3.3. corresponding to the "husband forbids" index, the restaurant, movies and parties index, and the spare time activities index. You will note that we changed the crucial term "forbids" to "strongly objects" in Mexico City. We felt that use of the term forbids was too strong for Mexico City but looking at the marginal distributions, we may have been wrong. Again, the list of items is changed depending on local circumstances. The purpose here was to obtain an index of constraints placed on the wife i.e. to what extent was she permitted alternatives by the husband? Conceptually, there is clearly an overlap between the forbids index and the power index, but that is no reason to be disturbed.

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The restaurants, movies, parties items were a quick and dirty attempt to obtain data on outside activities in the absence of more elaborate and difficult to collect, time budget items. The reader may be surprised with the high frequency of movie attendance in Ankara; however, this was in the pre-television period and the data appear suspicious but the following observations are offered: all showings at the movies were sold out; tickets were purchased by waiting in lines for hours; the tickets were bought either hours or days before the showing; tickets were regularly resold at a profit; there was no way you could purchase a ticket at the window and walk directly into the movie house. It is probable that the frequent movie attendance represented an important modern exposure for women, who frequently were forbidden to go grocery shopping. Double-O-Seven breaks through the veil (which was almost never seen in Ankara).

A further attempt at measuring the locus of female activities was the open-ended question dealing with "free time" (Table 3.3). The stem of that question (Aside from visiting . . .) relates to its placement in the schedule. We followed the question by the probe, "anything else?", and interviewers recorded exact responses. The first four items mentioned were coded but most women did not mention four activities. The responses are obviously easy to obtain and provide the respondent with an opportunity to "engage in conversation", breaking the closed question pattern and probably contributing to rapport.

The "size of world" question, Table 4, represents an attempt to measure the extent of the respondent's horizon. When a place or country is mentioned and recorded on the schedule, it can be coded later, in terms of distance from the local area, providing the "small, medium, and large world" categories shown in the later tables. This ordinal scale, produced from an item that looks like a joke, is highly correlated with almost any variable examined, not only with fertility. More important, it has strong net effects, independent of formal education. The only possible problem in using a question like this might relate to differences in the relative visibility of the countries. For example, one is bothered by the high frequency of a U.S.A. response in Turkey. Does this response imply a larger horizon than, say, France?

The Data (Tables 5–8)

To examine the relevance of the modernism items for fertility three measures have been chosen – live births, total expected births, and whether the respondent ever used a means of family limitation, including methods not involving specific devices (rhythm, withdrawal), but excluding the use of abortion. The latter was fairly common in Ankara in 1966, but relatively rare in Mexico City three years ago. Abortion has been excluded for another reason – its pattern of relationship to the background and modernism items is totally different from "ever used" as defined here.

The reader may not be familiar with the use of total expected births. After obtaining a fairly standard pregnancy-live birth-child mortality history, and following with a sequence of questions dealing with current pregnancy and fecundity, we asked the following question:

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D21 (In addition to your current pregnancy) How many more *children do you actually expect to have by the time your family is completed?*

This question had appropriate follow-up procedures built into the schedule to handle women who were evasive or had difficulty with the reality orientation of the question (there were very few). In addition to the expectations question, we asked about number of children wanted and ideal number of children. Respondents were prepared for the different concepts by the statement (preceding any of them):

To get an accurate picture of the future growth of families in (Turkey, Mexico), we need to get information about the number of children couples want, how many they actually expect *to have, and so on.*

There are two points to this discussion:

1. An analysis of the data on expectations shows them to be a rather reasonable prediction of future behavior when evaluated relative to the wife's fertility history, age, etc.
2. Women made a sharp distinction between number of children wanted and expected number. This is true for means or relationships.

In short, total expected births seems to be an important indicator of future behavior that has much more freedom from the unknown types of fantasies involved in questions about wanted number, ideal number, etc.*

The tables are organized in the same order as the previous section:

T5 Power
T6 Segregation
T7.1 Containment – Forbids
T7.2 Containment – Restaurants, Movies, Parties
T7.3 Containment – Spare Time Activities
T8 Size of World

The tables speak for themselves for there is hardly a question that fails to predict consistently all three fertility variables in the proper direction for each broad age group. The number of inconsistencies is so small among the hundreds of numbers shown that each direction reversal has been footnoted. The picture that emerges is extremely compelling. The five minute investment in power, segregation, and containment appears to have paid off.

As an aside, on might note that the differences in expectations are consistently larger than the differences in live births. In this sense, it would be very difficult to argue that the relationship is entirely a function of the constraints placed on the woman by the number of children she already has. Obviously, this bolsters the argument that a particular life style at time 1 has implications for fertility at time 2.

Another feature of the tables, that could have some relevance for their potential applicability

* Occasional Paper No. 13, "Ideal Family Size" by Helen Ware, deals with this subjectarea.

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to a fairly wide range of countries, is the difference between the two cities in the means of fertility behavior. The Ankara wives will probably average about 4 children, the Mexico City wives about 6 – probably the highest fertility level in any large city of the world – in fact, fairly comparable to the country level of many LDC's. Clearly, we are dealing with a highly heterogeneous situation by examining city data and this may contribute to the relative success, but the modernism items do work at two different fertility levels and the discipline has not been particularly successful in uncovering variables underlying the variance in fertility.

The Data (Tables 9–12)

This sequence of tables is restricted to fecund women under 45 years old, since that may be the group most frequently analyzed from the WFS data to be collected over the next several years. The first table collapses the individual questions into indexes representing the conceptual dimensions already discussed. The procedure used was to dichotomize each question in a set, assigning 1–0 values, and summing to obtain the index value. The index values are then further collapsed into trichotomies. The criterion employed to create the three category system for each index was simply to obtain the most equal distribution of cases, given the different response patterns in the two cities. The 0–1/5 shown for the power index means that the husband "almost always decided" or "usually decided" for none or one of the five questions in the series.

The crude indexes typically do a better job of predicting fertility than the individual items but it should be emphasized that this form of index construction *does not* maximize the explanatory power of the variables. Since the objective is to expose potential users of these kinds of questions to their possible utility in a fertility survey, it would be a waste to develop a maximization procedure for Mexico which would not be the same as the maximization procedure for Yugoslavia.

Table 10 displays the relationship of the fertility variables to the three background variables employed throughout the analysis. There is little by way of surprise here; however, one might note that income is a slightly stronger predictor of family planning than wife's education. In both cities, at the time of the study, there was no appreciable public program and contraceptives were not inexpensive relative to income. For the other variables, wife's education does the best job of predicting.

Relationships between background and the indexes with fertility are summarized in Table 11 by using *etas* – the square root of the explained variance. (These are derived from the category systems shown in Tables 9 and 10). Since almost every relationship in those tables is monotonic the etas are extremely similar to correlation coefficients (the exception is place of birth by use for Mexico City). With a few minor exceptions the correlations (*etas*) are higher in Ankara than in Mexico. It is not certain why this is so, but the following comment is offered: The entire social structure of Ankara is more crystallized than the one in Mexico City. Thus, by looking at any one variable, other characteristics are more easily predictable so that any single dimension provides a better picture of something that is multidimensional.

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Using other data, not shown here, the intercorrelations among the dimensions of modernism have been examined and their structures found to be similar. In both settings, forbids (strongly objects), power, and RMP have the highest intercorrelations with the other variables; spare time activities, size of world, and segregation have the lowest intercorrelations. In both cases, the highest intercorrelation among any two items is between power and forbids, agreeing with impressions one might obtain by looking at the questions. On the other hand, there is enough dissimilarity among items to argue that one should keep all of them. The inter index correlations range between .3 and .51 in Ankara, and between .22 and .38 in Mexico City. To use the language of persons most actively engaged in modernization research, this suggests that modernization is more "uneven" in Mexico City than in Ankara. The correlations (Pearson) between the background characteristics and the indexes are given in Table 12, and they are all relatively high, with the exception of wife's place of birth in Mexico City (see footnote to Table 12).

The modernism dimensions fit the appropriate image of an intervening variable as they are rather highly correlated, at least for fertility research, with both the independent and dependent variables. It is also clear that we have managed to tap several different dimensions of so called modern styles of life. We can now turn to the issue of their net effects on fertility.

The Data (Tables 13–15)

Any variable identified as an intervening variable (modernism, here) in a presumed causal sequence should have a net effect on the dependent variable, independent of the variable(s) that initiate the sequence. The determination of net effects necessarily involves multivariate analysis. The concept of net effect is intuitively obvious in the case of the cross tabulation – you control the background variables and see what contribution the trichotomies of modernism make toward the explanation of fertility. In our case, it would involve a 180 cell table – obviously impossible. So we must turn to the magic world of multivariate coefficients (none of which are magic), to cope with this simple concept. Conventionally, one uses regression analysis and presents partial regression coefficients, standardized betas or path coefficients. But the data you are now familiar with come in the form of categories and, descriptively, a system employing categories will generate information that is closer to the intuitive grasp that the reader has of these data. Therefore, with this in mind, the following analysis utilises multiple classification analysis, a multivariate technique that uses the categories of the background variables and modernism indexes already given in the previous tables. (Appendix 2 contains a description of multiple classification analysis).

In Table 13, each of the dimensions is put to the test of examining its contribution to the explanation of fertility after adjustment for place of birth, education, and income. The adjusted means given in the table are obtained by adding the net effects from each index category to the grand mean. If the adjusted category means have a monotonic pattern, showing lower expected numbers of children and greater use of family limitation in those categories corresponding to the most modern life styles, we would conclude that *each* separate dimension

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makes a net contribution in the predicted direction. If the adjusted category means have no pattern, we would be forced to conclude that the original correlations between the indexes and fertility simply reflected their relationship with the background variables and do not *add* to the explanation of fertility.

Since there are six indexes and two cities, we have twelve cases to observe. In ten of the twelve, the lowest expected fertility corresponds to the most modern category. In nine of the twelve the highest expected fertility corresponds to the most traditional category. If we switch our attention to use of family limitation, the corresponding figures are again ten of twelve and nine of twelve following the predicted direction. What was originally a very impressive set of large differences between the category means, shown in Table 9, now appears as a set of smaller net differences, with some inconsistencies. But this is a very severe test of the role of the indexes. We think of modernism as a multidimensional phenomenon and have already shown that the several dimensions are not simple reflections of one another. A given woman may be modern in some dimensions, less so in others.

The most appropriate test of the hypothesis that modernism leads to lower fertility and higher use, independent of the background variables, would be one in which we combine the dimensions of power, segregation, and containment into a single index of extensiveness of women's roles. This is done in Tables 14 and 15. Here, we show the net contributions of the background variables and the net effects of the index so that they can be compared in examining their impact on fertility.

The combined index is made up of the six sub-indexes we have displayed consistently: husband's power in decision making, sex role segregation attitudes, forbids, RMP, non-home centered leisure activities, and size of world. The categories of each dimension are scored zero for the most traditional, one, and two for the most modern, the categories corresponding to those shown in Tables 9 and 13. These are summed to create an index running from zero (traditional) to twelve (modern). This crude approach to index construction would undoubtedly upset a wide variety of "measurement types" who might turn to factor analysis or a maximizing procedure. But this approach has little appeal; why spend our time talking about the potential impact of several dimensions and then giving a few of them differential weights, throwing out several, and acting as if that was what we were talking about originally? The index shown in Tables 14 and 15 is simple, comprehensible, and straight. Either we've got something worth investment in a fertility survey, or we haven't!

In these tables, the gross deviation, the difference between the grand mean and the category mean, is decomposed into two parts: the net effect from the category (net effect) and the residual effect derived from the distribution of the category respondents across combinations of all other categories and the net effects of those categories (residual effect).

In Ankara (Table 14) and Mexico City (Table 15) the explanation of expected births is dominated by wife's education and the combined role index. Both make very substantial, monotonic, net contributions. For example, in Ankara, the net difference in mean expected number of children, between illiterate wives and those who have completed high school or

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more, is 1.9 children. When the extreme categories in the combined role index are compared, the net difference is 1.7 children. The net contribution of income after adjustment for the other variables is not only small, its direction is difficult to detect. This suggests that "all other things being equal" (with this set of variables), children do not look much like a consumer durable, which is not to argue that income is unimportant. Obviously, income provides access to several dimensions of modernism, which is the reason for the negative gross relationship found between income and fertility in most studies.

A different pattern emerges for use. Here, the large net effects come from income and the index, and the same pattern exists in both cities. Net of other variables high income leads to greater use, and more modern families use family planning methods more frequently. Net differences between the extreme categories of income and modernism are very large – 26% for income, 52% for the index in Ankara; 36% for income, 29% for the index in Mexico City. It should be emphasized again that contraceptive costs relative to income are high in both of these settings. And if that were not the case? Then, supposedly, we could anticipate close to zero net contributions from income.

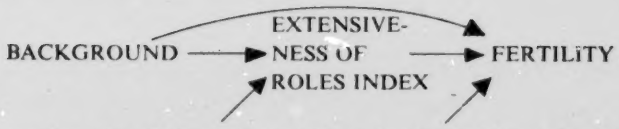
The other important difference in the results coming from the analysis of use is that the system of independent variables has either eliminated or reversed the usual educational effect. In Ankara, after standardization for the other variables, the net effects of education on use are *negative*. In Mexico City they have no pattern whatsoever. This must mean that we have succeeded in translating education into either its income effects or its life styles effects, which leaves little for pure reading, pure writing, or pure arithmetic.

The fertility problem can also be decomposed by using explained variance, a routing that may be more familiar to some readers. Imagine that we have a two independent variable system – a background variable and a modernism variable. By using the same data from Tables 14 and 15, we obtain the following:

	Ankara		Mexico City	
	Exp. Bir.	Ever Used	Exp. Bir.	Ever Used
Variance explained by background	28.6%	14.6%	26.7%	23.0%
Variance explained by the index	26.8%	16.2%	18.6%	21.0%
Variance explained by both	31.5%	18.9%	28.2%	28.1%
Net explained by background	4.7%	2.7%	9.6%	7.1%
Net explained by the index	2.9%	4.3%	1.5%	5.1%
Joint contribution	23.9%	11.9%	17.1%	15.9%

The net explained by the background variables represents that part of the background explanation of fertility that does not get translated into the index. The net explained by the index is that component of its explanation of fertility that is not "inherited" from the background. Most of the background variables pass through the index on their way to fertility and most of the index effect is inherited from background in the causal scheme:

00018



It would appear then, that the five minutes of interviewing time devoted to power, segregation, and containment has very real prospects of payoff. We seem to have captured a segment of modernism that helps explain the relationship between the background variables and fertility, and that makes its own contribution, as well.

The Data (Table 16)

At the outset we did not state or imply that modernism *was* power, segregation, and containment, but rather that these components would capture some of the relevant aspects of modernism for fertility studies. We also purposely ignored some dimensions because they are explicitly covered in other modules. For example, *modern objects* is already well covered both in the occasional paper and the module on economic data*, and deserves the full treatment it gets there. No one could or would deny that media are part of the modernization process. Some are built into the basic WFS household schedule.

The purpose of this last table is to pick up some of the excluded dimensions purposely ignored in the first 23 pages of this report. The data in Table 16 deal with religiosity, media, modern objects, a kinship-marriage index, and home production. (The questions corresponding to these indexes are given in the Appendix.) We have not taken the time to give some of these indexes proper care and attention and, in that sense, the indexes shown may underestimate the importance of the dimension for fertility. Some, like media exposure or modern objects may not require great care. The respondent is either exposed to selected media or she is not, the household either contains the object or it does not.

All of the indexes operate in the proper direction in Ankara with respect to gross relationships. In Mexico City there are peculiar gross relationships for religiosity and the kinship-marriage indexes. There are problems with both of these indexes in that city. Our religiosity index focuses too heavily on formal religious training and as a result is rather hopelessly mixed with education, which operates in the opposite direction. This will require some untangling before reasonable comments can be made about the net effect of "religiosity" on fertility. In Ankara, we don't have the problem. We deal with frequency of prayer, mosque attendance (husbands only), and religious holiday fasting. Here, the net effects are rather feeble and hypotheses about religiosity and fertility may simply be wrong.

The home production index, based on questions about the home preparation of certain foods or making clothing, appears to work fairly well. Women actively engaged in home production expect to have more children, net of birth place, education, and income in both cities. The predicted net effects for family planning work in Mexico City, but are reversed in Ankara. The kinship-marriage index is based on five questions in Ankara – whether the marriage was arranged, how long the wife saw the husband regularly before marriage, whether the husband

* Occasional Paper No. 11, "Economic Data for Fertility Analysis" by Deborah S. Freedman (with Eva Mueller); Occasional Paper No. 12 "Economic Modules for use in Fertility Surveys in Less Developed Countries" by Deborah Freedman and Eva Mueller.

00019

was a relative, whether the couple lived with the husband's parents at marriage and how long they stayed in that situation. Modern marriages, fitting the pattern of no arrangement, marrying a non-relative, and setting up an independent household, result in fewer children and a higher incidence of use, net of the background items. In Mexico City three of the five items had no distribution, so the "index" is really whether the new couple went to live with relatives shortly after and the period they stayed there. It does nothing for fertility.

The media exposure index works exceptionally well in Ankara for expectations and for use. But one should point out that the most important form of media, with respect to predicted fertility, is movies. As contrasted with other forms, this one not only exposes the wife to "new ideas", it takes her away from the home which is competitive with child-bearing demands. In Mexico City the media have a strong net effect on family planning but do little for expectations.

Modern objects, more than any other index, have exceptionally strong effects on the use of family planning in Mexico City. At the gross level, the *difference* in use between opposites in the trichotomy is 46%, and at the net level, still a very powerful 22%. The index also works for expectations in Mexico City and for use in Ankara. It does not have a discernable direction for expectations in Ankara.

In this set of miscellaneous items, only the religiosity data fail to hold some promise. Media exposure and modern objects should be built into any fertility schedule that seeks a product other than a descriptive one. Kinship-marriage and home production are a bit more ambiguous, but could be used if time permits.

Conclusions

Although some of the index names (*forbids, size of world*) or individual items used in this paper appear strange at first sight, it should be fairly obvious that they attempt to deal with the kinds of variables that have been suggested for fertility studies over a long period of time. Women's work is a dimension almost axiomatically included in such studies. But what is the axiom? Is it not that the time required by work makes it more difficult to have children or that exposure to non-homemaker values will work against having children? If that is the case, work is only one of many types of activities that drain time or expose women to alternative values. Work or potential work is a convenient category for economists because it can be translated to dollars. One is inclined to argue that it is not so much the dollars as it is the awareness of any alternatives that make children expensive in a social sense.

We have reported the results from only two research sites. Differences in the kinds of questions used at each site should be instructive for potential users of a modernization module. If constraints in wives' activities imposed by the husband do not involve wearing a head covering or veil, then clearly one doesn't ask about these specifics. But one should attempt to measure the constraint. Similarly, if no movies are available in a local area, then the researcher might ask how often the wife gets to a nearby town. Societies at different levels of development have some power differences between husband and wife, some differences in perceptions

00020

of sex segregation, some differences in containment. Each component tells us something about the woman's freedom to select among fertility alternatives. A consumer of these materials should be able to point to a country or a region in which the relative power of wives is high or sex segregation of roles is low *and* the fertility is high. That is not only possible, it is probably true. The response to that observation would have to be "that is why the correlations are high, not 1.0". Moreover, the reader should note that the primary use of the materials on power, segregation, and containment is to differentiate fertility behavior *within* societies, though the argument also fits intersocietal and time comparisons fairly well.

All surveys operate under enormous time constraints. The value of the final product is a function of the intelligence used in trade-offs between competing questions. In this paper a strong case has been made for incorporating some of these materials, especially those dealing with the extensiveness of women's roles and attitudes.

00021

Tables

000222

Table 1

Frequency Distributions for Husband-Wife Decision Making Questions for Ankara and Mexico City

In most families, either the husband or the wife has the most say about some decisions, although they may talk it over first. I will read some items to you and I would like you to tell me whether your husband almost always decides, your husband usually decides, you usually decide or you almost always decide.

		Ankara		Mexico City*	
		Freq.	Pct.	Freq.	Pct.
For instance, who usually has the most say about which couples you see most often?	HA	286	35.6	291	36.4
	HU	257	32.0	205	25.6
	B	201	25.0	204	25.5
	WU	52	6.5	80	10.0
	WA	7	0.9	19	2.4
. . . about which relatives you see?	HA	231	28.8	161	20.1
	HU	198	24.7	216	27.0
	B	315	39.2	297	37.2
	WU	49	6.1	103	12.9
	WA	10	1.2	23	2.9
. . . about the purchase of major household items?	HA	159	19.8	136	17.0
	HU	138	17.2	146	18.3
	B	380	47.3	236	29.5
	WU	104	13.0	178	22.3
	WA	22	2.7	102	12.8
. . . about how much money your family can afford to spend on food?	HA	183	22.8	145	18.1
	HU	115	14.3	124	15.5
	B	225	28.0	111	13.9
	WU	204	25.4	210	26.3
	WA	76	9.5	209	26.2
. . . about how money saved or earned is to be spent?	HA	266	33.1	194	24.3
	HU	149	18.6	187	23.4
	B	296	36.9	292	36.6
	WU	69	8.6	86	10.8
	WA	23	2.9	39	4.9
Total		803	100.0	798	100.0

* The frequency distributions for Mexico City are weighted by the proper sampling weights, resulting in some minor discrepancies in totals for the Mexico City data, amounting to one or two cases. Ankara data are self-weighting and should involve no discrepancies.

00023

Table 2

Frequency Distributions for Sex Role Segregation Attitude Questions for Ankara and Mexico City

Now I would like to get your opinion on some matters concerning family life. I will read you some statements and I would like you to tell me whether you strongly agree, agree, disagree, strongly disagree. The first one is:

		Ankara		Mexico City	
		Freq.	Pct.	Freq.	Pct.
Most of the important decisions in the life of the family should be made by the man of the house	SA	342	42.6	239	29.9
	A	286	35.6	356	44.6
	INT	12	1.5	4	0.5
	D	144	17.9	136	17.0
	SD	19	2.4	63	7.9
There is some work that is men's and some that is women's and they shouldn't be doing each other's.	SA	355	44.2	132	16.5
	A	293	36.5	351	44.0
	INT	9	1.1	16	2.0
	D	123	15.3	253	31.7
	SD	23	2.9	46	5.8
A wife should *not* expect her husband to help around the house after he has come home from a hard day's work.	SA	410	51.1	200	25.1
	A	292	36.4	402	50.4
	INT	11	1.4	11	1.4
	D	65	8.1	154	19.3
	SD	25	3.1	31	3.9
It is perfectly alright for men to go out alone about as often as they want.	SA	184	22.9	60	7.5
	A	157	19.6	275	34.5
	INT	12	1.5	12	1.5
	D	225	28.0	255	32.0
	SD	225	28.0	195	24.5
. . . and how about the saying: If you leave a girl by herself she either marries a drummer or a piper.	SA	400	49.8	–	–
	A	223	27.8	–	–
	INT	19	2.4	–	–
	D	114	14.2	–	–
	SD	47	5.9	–	–
Total		803	100.0	798	100.0

00024

Table 3.1

Frequency Distributions for Wife Containment Items:
Husband Forbids (Ankara) Husband Strongly Objects (Mexico City)

Husband forbids (Ankara)		**Husband strongly objects** (Mexico City)			
Many husbands forbid their wives to do certain things. Does your husband forbid you to do any of these things?		*Many husbands strongly object to their wives doing certain things. Does your husband strongly object to any of these things?*			
		Ankara		Mexico City	
		Freq.	Pct.	Freq.	Pct.
to talk to men your husband doesn't know	F	655	81.6	626	78.4
	NF	148	18.4	172	21.6
to visit women your husband doesn't know	F	424	52.8	499	62.5
	NF	379	47.2	299	37.5
A: to go to the matinee at the movies alone	F	557	69.4	606	75.9
MC: to go to the movies alone	NF	246	30.6	192	24.1
A: to go to parties by yourself	F	726	90.4	637	79.8
MC: to go to fiestas by yourself	NF	77	9.6	161	20.2
A: to sit together with men during visits to your home	F	244	30.4	–	–
	NF	559	69.6	–	–
A: to wear short sleeve dresses	F	455	56.7	–	–
	NF	348	43.3	–	–
A: to go shopping by yourself	F	296	36.9	–	–
	NF	507	63.1	–	–
A: to go without a scarf or head covering	F	457	56.9	–	–
	NF	346	43.1	–	–
MC: to dance with other men at fiestas you both go to	F	–	–	569	71.3
	NF	–	–	229	28.7
MC: to wear clothes that catch the eye	F	–	–	487	61.0
	NF	–	–	311	39.0
MC: to have a few drinks	F	–	–	364	45.6
	NF	–	–	434	54.4
Total		803	100.0	798	100.0

00025

Table 3.2

Frequency Distribution for Wife Containment Items: Restaurants, Movies, Parties for Ankara and Mexico City

*Now I would like to read you a list of activities and I would like you to tell me how often you and your husband do these things either alone or together.**

	Ankara		Mexico City	
	Freq.	Pct.	Freq.	Pct.
Go to a restaurant				
daily	4	0.5	18	2.3
almost daily	0	0.0	7	0.9
1–2/week	14	1.7	94	11.8
1–2/month	73	9.1	144	18.0
few times/year	–**	–	113	14.1
less often	101	12.6	81	10.1
never	611	76.1	342	42.8
Go to the movies				
daily	4	0.5	1	0.1
almost daily	1	0.1	0	0.0
1–2/week	203	25.3	90	11.3
1–2/month	219	27.3	194	24.3
few times/year	–**	–	166	20.8
less often	119	14.8	127	15.9
never	257	32.0	220	27.6
A: Go to parties				
MC: Go to reunions				
daily	3	0.4	1	0.1
almost daily	5	0.6	2	0.3
1–2/week	27	3.4	12	1.5
1–2/month	79	9.8	144	18.0
few times/year	–**	–	264	33.1
less often	165	20.5	201	25.2
never	524	65.3	174	21.8
Total	803	100.0	798	100.0

* Separate frequencies were obtained for husband and wife. Distributions shown are the wives.
** The frequency category "a few times a year" was not used in the Ankara Schedule.

00026

Table 3.3

Frequency Distribution for Wife Containment Items: Other Spare Time Activity Items for Ankara and Mexico City

Aside from visiting friends and relatives, what kinds of things do you do in the day or evening, when you have some free time?

	Ankara		Mexico City	
	Freq.	Pct.	Freq.	Pct.
1st Activity				
home centered (housecare, childcare, listen to radio, sew, rest or does nothing)	683	85.0	592	74.2
mixed activity (paint, study, gardening, walk, go to park, take a ride)	72	9.0	141	17.7
non-home centered (spectator events, work, participatory events)	48	6.0	65	8.1
2nd Activity				
home centered, no 2nd activity	654	81.4	608	76.2
mixed	77	9.6	110	13.8
non-home centered	72	9.0	80	10.0
3rd Activity				
home centered, no 3rd activity	692	86.2	662	83.0
mixed	51	6.3	92	11.5
non-home centered	60	7.5	44	5.5
4th Activity				
home centered, no 4th activity	732	91.2	700	87.7
mixed	29	3.6	54	6.8
non-home centered	42	5.2	44	5.5
Total	803	100.0	798	100.0

00027

Table 4

Frequency Distribution for "Size of World" Question for Ankara and Mexico City

What country do you think is the farthest place in the world from Turkey/Mexico?

	Ankara		Mexico City	
	Freq.	Pct.	Freq.	Pct.
1. Places in Turkey	36	4.5		
2. Near East, Western Europe except England and Spain	187	23.3		
3. Russia, India, Scandinavia, England, Spain Africa	77	9.6		
4. Central Asia, Siberia	8	1.0		
5. North Pole, South East Asia (Vietnam, Cambodia), Latin America	55	6.8		
6. South Pole, Pacific Ocean, Japan, *Western* U.S.	90	11.2		
7. U.S.A.	267	33.3		
8. Ambiguous answers (boundaries, heathen countries, oceans, other side of world, Mecca)	53	6.6		
9. I don't know	30	3.7		
1. Places in Mexico (or don't know)			66	8.3
2. U.S.A., Cuba			108	13.5
3. Canada, Alaska, Northern South America			41	5.1
4. Brazil, Argentina, Uruguay, Chile, Iceland, North Pole			24	3.0
5. Spain, "Rome," Northern and Western Europe			181	22.7
6. U.S.S.R., Bulgaria, Turkey, Japan, Africa, South Pole			191	24.0
7. "Asia"			23	2.9
8. China			121	15.1
9. India, Australia, Vietnam, Indo-China, Cambodia, Pakistan			43	5.4
Total	803	100.0	798	100.0

00028

Table 5

Live Births, Expected Births and Ever Used Family Limitation by Wife's Age and Decision Making Items for Ankara and Mexico City

		Wife's Age										
		Under 30 Years Old				30–44 Years Old				45 or Older		
Ankara: Who has most say about:		Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
which couples are seen . . .	Husb.	2.7	4.4	26%	234	4.2	5.0	33%	230	4.7	22%	79
	Both, Wife	1.8	3.5	42%	90	3.1	3.6	59%	114	3.7	45%	56
which relatives are seen . . .	Husb.	2.7	4.5	22%	199	4.5	5.4	28%	170	4.6	20%	60
	Both, Wife	2.0	3.6	45%	125	3.3	3.7	55%	174	4.0	40%	75
purchasing major goods . . .	Husb.	2.8	4.6	19%	124	4.7	5.5	27%	132	5.2	15%	41
	Both, Wife	2.2	3.9	39%	200	3.3	3.9	50%	212	3.8	38%	94
spending money on food . . .	Husb.	2.9	4.8	20%	129	4.4	5.2	29%	122	4.7	15%	47
	Both, Wife	2.1	3.8	38%	195	3.6	4.6	48%	222	4.0	40%	88
spending saved money . . .	Husb.	2.8	4.6	19%	173	4.5	5.3	33%	178	4.8	17%	64
	Both, Wife	2.1	3.7	44%	151	3.2	3.7	51%	166	3.7	44%	71
Total		2.4	4.2	31%	324	3.9	4.5	41%	344	4.3	31%	135
		Under 30 Years Old				30–44 Years Old				45 or Older		
Mexico City: Who has most say about:		Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
which couples are seen . . .	Husb.	2.6	5.6	16%	206	5.4	6.8	24%	204	6.8	6%	85
	Both, Wife	2.3	4.7	50%	103	5.2	6.1	41%	107	5.5	17%	92
which relatives are seen . . .	Husb.	2.7	5.6	22%	151	5.7	7.0	20%	153	6.7	7%	73
	Both, Wife	2.2	5.1	33%	157	5.1	6.1	39%	159	5.6	15%	104
purchasing major goods . . .	Husb.	2.6	5.9	18%	108	5.5	6.9	18%	113	6.4	8%	60
	Both, Wife	2.4	5.0	33%	200	5.3	6.3	36%	199	5.9	14%	117
spending money on food . . .	Husb.	2.8	5.9	15%	114	5.4	6.6	29%	99	7.3	10%	57
	Both, Wife	2.3	5.0	35%	195	5.4	6.5	30%	213	5.5	13%	121
spending saved money . . .	Husb.	2.4[R]	5.5	17%	135	5.4	6.7	28%	143	6.8	9%	82
	Both, Wife	2.5	5.1	39%	153	5.4	6.4	31%	169	5.5	15%	95
Total		2.5	5.3	28%	309	5.4	6.5	30%	312	6.1	12%	178

R: Direction reversal.

00029

Table 6

Live Births, Expected Births and Ever Used Family Limitation by Wife's Age and Sex Segregation Attitude Items for Ankara and Mexico City

Ankara: Agree or disagree to:		Wife's Age: Under 30 Years Old Live Bir.	Exp. Bir.	Ever Used	N	30–44 Years Old Live Bir.	Exp. Bir.	Ever Used	N	45 or Older Live Bir.	Ever Used	N
important decisions should be made by the man . . .	A	2.6	4.4	26%	265	4.2	4.9	35%	261	4.5	27%	102
	I, D	1.8	3.3	51%	59	2.8	3.3	60%	83	3.6	42%	33
some work is men's . . .	A	2.6	4.3	29%	272	4.2	4.9	37%	265	4.2[R]	32%[R]	111
	I, D	1.9	3.4	40%	52	2.8	3.3	56%	79	4.3	29%	24
wife should not expect her husband to help . . .	A	2.5	4.3	29%	284	4.0	4.7	39%	300	4.2[R]	31%[R]	118
	I, D	1.9	3.1	43%	40	3.0	3.7	55%	44	4.4	29%	17
alright for men to go out alone as often . . .	A	2.8	4.6	23%	141	4.7	5.5	27%	141	4.4	24%	59
	I, D	2.2	3.8	37%	183	3.3	3.9	51%	203	4.2	37%	76
marries drummer or piper . . .	A	2.6	4.4	26%	247	4.2	4.9	38%	264	4.5	27%	112
	I, D	1.9	3.4	47%	77	2.7	3.2	52%	80	3.3	52%	23
Total		2.4	4.2	31%	324	3.9	4.5	42%	344	4.3	31%	135

Mexico City: Agree or disagree to:		Under 30 Years Old Live Bir.	Exp. Bir.	Ever Used	N	30–44 Years Old Live Bir.	Exp. Bir.	Ever Used	N	45 or Older Live Bir.	Ever Used	N
important decisions should be made by the man . . .	A	2.6	5.6	22%	224	5.5	6.7	24%	239	6.3	8%	132
	I, D	2.1	4.7	44%	85	5.2	6.0	49%	72	5.6	25%	45
some work is men's . . .	A	2.5	5.0	21%	199	5.7	6.9	28%	175	6.7	6%	108
	I, D	2.5	5.0	40%	110	5.0	6.1	32%	136	5.1	21%	69
wife should not expect her husband to help . . .	A	2.4[R]	5.4	23%	240	5.5	6.6	25%	240	6.1	12%[R]	122
	I, D	2.7	5.1	44%	69	5.2	6.2	44%	72	6.0	11%	56
alright for men to go out alone as often . . .	A	2.5	5.7	27%	98	5.9	7.0	22%	129	6.3	14%[R]	108
	I, D	2.4	5.2	28%	211	5.0	6.2	35%	183	5.7	9%	69
Total		2.5	5.3	28%	309	5.4	6.5	30%	312	6.1	12%	178

R: Direction reversal.

00030

Table 7.1

Live Births, Expected Births and Ever Used Family Planning by Wife's Age and Husband Forbids Items (Ankara) or Husband Strongly Objects Items (Mexico City)

		Wife's Age										
		Under 30 Years Old				30–44 Years Old				45 or Older		
Ankara: Does husband forbid wife to:		Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
talk to men . . .	F	2.5	4.3	29%	280	4.1	4.8	36%	282	4.7	23%	93
	NF	1.8	3.3	45%	44	2.9	3.4	63%	62	3.4	50%	42
visit women . . .	F	2.7	4.5	26%	196	4.3	5.1	33%	175	4.9	13%	53
	NF	2.1	3.6	39%	128	3.4	4.0	50%	169	3.8	43%	82
go to matinee alone . . .	F	2.5	4.3	27%	244	4.2	5.0	34%	233	4.8	19%	80
	NF	2.2	3.7	43%	80	3.0	3.5	57%	111	3.4	49%	55
go to parties alone . . .	F	2.5	4.2	30%	305	4.0	4.7	39%	307	4.5	28%	114
	NF	1.7	3.3	42%	19	2.6	2.9	59%	37	3.1	48%	21
sit with men . . .	F	2.8	4.8	22%	105	4.4	5.4	27%	98	4.7	15%	41
	NF	2.3	3.9	35%	219	3.6	4.2	47%	246	4.1	38%	94
wear short sleeve dresses	F	2.9	4.8	24%	189	4.5	5.4	25%	189	4.9	17%	77
	NF	1.8	3.3	40%	135	3.1	3.5	61%	155	3.4	50%	58
go shopping alone . . .	F	2.6	4.6	20%	150	4.9	5.9	26%	108	4.7	11%	38
	NF	2.3	3.9	40%	174	3.4	3.9	48%	236	4.1	39%	97
go without scarf . . .	F	2.9	4.8	21%	192	4.7	5.6	26%	185	4.9	19%	80
	NF	1.8	3.2	45%	132	2.9	3.3	59%	159	3.3	49%	55
Total		2.4	4.2	31%	324	3.9	4.5	41%	344	4.3	31%	135
Mexico City:		Under 30 Years Old				30–44 Years Old				45 or Older		
Husband strongly objects to having wife:		Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
talk to men . . .	SO	2.5	5.5	23%	267	5.7	6.9	28%	256	7.1	6%	103
	NSO	2.4	4.3	55%	42	3.9	4.8	40%	56	4.8	20%	74
visit women . . .	SO	2.7	5.6	22%	206	5.8	7.1	25%	208	6.8	7%	86
	NSO	2.1	4.7	38%	103	4.5	5.4	39%	104	5.4	17%	92
go to movies alone . . .	SO	2.5	5.6	23%	254	5.6	6.8	27%	240	6.5	8%	112
	NSO	2.2	4.2	49%	55	4.7	5.5	38%	72	5.4	19%	65
go to fiestas alone . . .	SO	2.5	5.5	25%	271	5.6	6.8	29%	252	6.3	8%	114
	NSO	2.0	3.9	47%	37	4.6	5.3	33%	60	5.7	19%	63
dance with other men . . .	SO	2.6	5.6	25%	221	5.6	6.9	28%	240	6.7	7%	108
	NSO	2.2	4.7	34%	88	4.6	5.2	36%	72	5.1	19%	70
wear eye catching clothes	SO	2.5	5.5	23%	186	5.8	7.1	23%	196	6.6	7%	106
	NSO	2.4	5.1	35%	123	4.6	5.5	41%	116	5.4	20%	72
have a few drinks . . .	SO	2.7	5.8	20%	147	6.1	7.4	24%	148	7.3	4%	70
	NSO	2.3	4.9	35%	162	4.8	5.8	35%	164	5.3	17%	108
Total		2.5	5.3	28%	309	5.4	6.5	30%	312	6.1	12%	178

00031

Table 7.2

Live Births, Expected Births and Ever Used Family Limitation by Wife's Age and Restaurants, Movies and Parties Items for Ankara and Mexico City

		Wife's Age										
		Under 30 Years Old				30–44 Years Old				45 or Older		
Ankara: How often wife goes to:		Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
restaurants:	occasionally +	1.5	3.0	51%	66	2.6	3.0	63%	97	3.1	48%	29
	never	2.7	4.5	26%	258	4.3	5.1	33%	247	4.6	26%	106
movies:	1–2/month +	1.9	3.6	42%	177	3.1	3.6	54%	189	3.8	51%	61
	<1–2/month	3.1	4.9	17%	147	4.7	5.6	26%	155	4.6	15%	74
parties:	occasionally +	1.9	3.5	47%	98	3.1	3.7	54%	141	4.1	40%	40
	never	2.7	4.5	24%	226	4.4	5.2	32%	203	4.3	27%	95
Total		2.4	4.2	31%	324	3.9	4.5	41%	344	4.3	31%	135
		Under 30 Years Old				30–44 Years Old				45 or Older		
Mexico City: How often wife goes to:		Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
restaurants:	1–2/month +	2.1	4.5	50%	114	4.4	5.2	45%	101	4.6	26%	47
	<1–2/month	2.7	5.8	15%	195	5.8	7.2	22%	211	6.6	7%	130
movies:	1–2/month +	2.2	5.1	32%	140	4.4	5.2	45%	94	4.8	20%	51
	<1–2/month	2.7	5.5	24%	169	5.8	7.1	23%	218	6.6	9%	126
reunions:	1–2/month +	2.0	4.7	34%	77	3.9	5.8	46%	53	4.7	39%	29
	<1–2/month	2.7	5.5	26%	231	5.7	6.9	26%	259	6.4	7%	148
Total		2.5	5.3	28%	309	5.4	6.5	30%	312	6.1	12%	178

00032

Table 7.3

Live Births, Expected Births and Ever Used Family Limitation by Wife's Age and Spare Time Activity Items for Ankara and Mexico City

	Wife's Age										
	Under 30 Years Old				30–44 Years Old				45 or Older		
Ankara: Spare time activities:	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
1st activity: home centered	2.6	4.4	28%	281	4.0	4.7	37%	289	4.5	27%	113
mixed, non-home centered	1.3	2.8	49%	43	3.0	3.5	64%	55	2.9	55%	22
2nd activity: home centered, none	2.7	4.4	26%	263	4.2	5.0	37%	274	4.4	26%	117
mixed, non-home centered	1.5	3.1	52%	61	2.5	2.8	59%	70	3.1	61%	18
3rd activity: home centered, none	2.5	4.2	30%	289	4.1	4.8	38%	285	4.4	28%	118
mixed, non-home centered	1.9	3.6	34%	35	2.7	3.2	58%	59	3.2	53%	17
4th activity: home centered, none	2.5	4.2	29%	296	3.9	4.6	35%	314	4.4	30%	122
mixed, non-home centered	1.8	3.5	46%	28	3.1	3.5	60%	30	2.9	46%	13
Total	2.4	4.2	31%	324	3.9	4.5	41%	344	4.3	31%	135

	Under 30 Years Old				30–44 Years Old				45 or Older		
Mexico City: Spare time activities:	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
1st activity: home centered	2.7	5.5	21%	224	5.7	6.9	25%	230	6.0	7%	137
mixed, non-home centered	2.0	4.8	45%	84	4.4	5.4	42%	81	6.3[R]	28%	40
2nd activity: home centered, none	2.6	5.4	25%	231	5.7	6.9	27%	240	6.6	9%	137
mixed, non-home centered	2.2	5.0	37%	77	4.3	5.3	40%	72	4.6	24%	41
3rd activity: home centered, none	2.5	5.5	24%	248	5.6	6.8	28%	264	6.4	10%	149
mixed, non-home centered	2.3	4.8	42%	60	4.5	5.1	40%	48	4.7	21%	28
4th activity: home centered, none	2.4	5.4	24%	271	5.5	6.6	28%	276	6.6	12%	153
mixed, non-home centered	2.8[R]	5.0	51%	38	4.7	5.8	46%	35	3.2	11%[R]	24
Total	2.5	5.3	28%	309	5.4	6.5	30%	312	6.1	12%	178

R: Direction reversal.

00033

Table 8

Live Births, Expected Births and Ever Used Family Limitation by Wife's Age and "Size of World" Question for Ankara and Mexico City

	Wife's Age										
	Under 30 Years Old				30–44 Years Old				45 or Older		
Ankara: "Size of world" question:	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
small[a]	3.1	5.1	18%	136	4.5	5.3	26%	123	5.0	17%	47
medium	2.1	3.8	39%	127	3.8	4.5	42%	145	4.0	32%	72
large	1.8	3.0	43%	61	2.9	3.3	64%	76	2.9	69%	16
Total	2.4	4.2	31%	324	3.9	4.5	41%	344	4.3	31%	135
	Under 30 Years Old				30–44 Years Old				45 or Older		
Mexico City: "Size of world" question:	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Ever Used	N
small[b]	2.7	6.3	4%	97	6.6	7.8	21%	71	7.2	4%	47
medium	2.2[R]	5.2	27%	70	5.6	6.9	23%	97	6.5	7%	38
large	2.5	4.8	44%	141	4.6	5.7	38%	144	5.4	18%	93
Total	2.5	5.3	28%	309	5.4	6.5	30%	312	6.1	12%	178

a. The responses grouped into perceptions of world size for Ankara were:
small: Don't know, ambiguous answers, Turkey, Near East, Western Europe except England and Spain – code categories 1, 2, 8, 9 in Table 4.
medium: Distant Europe, India, Africa, U.S.A. – code categories 3, 7 in Table 4.
large: Other Southeast and Central Asia, Latin America, Pacific Islands, Poles – code categories 4, 5, 6 in Table 4.

b. The responses grouped into perceptions of world size for Mexico City were:
small: Don't know, Mexico, U.S.A., Northern Latin America – code categories 1–3 in Table 4.
medium: Rest of Latin America, Europe except eastern portion – code categories 4–5 in Table 5.
large: Eastern Europe, Asia, Africa – code categories 6–9 in Table 4.

R: Direction reversal.

00034

Table 9

Live Births, Expected Births and Ever Used Family Limitation by Selected Indexes for Fecund Women Under 45 for Ankara and Mexico City

			Ankara				Mexico City			
	Criteria		Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N
Selected Indexes	Ankara	M.C.								
Husband's Power										
H decides:	0–1/5	0–1/5	2.5	3.5	56%	202	3.6	5.5	51%	178
	2–3/5	2/5	3.5	4.9	37%	192	3.8	6.2	26%	133
	4–5/5	3–5/5	3.9	5.4	21%	199	4.3	6.9	17%	225
Sex Segregation Attitudes										
W agrees to:	0–2/5	0–1/4	2.3	3.2	61%	105	3.5	5.2	57%	100
	3–4/5	2/4	3.1	4.5	40%	306	3.7	6.1	30%	163
	5/5	3–4/4	4.1	5.7	22%	182	4.3	6.7	21%	275
Forbids or Strongly Objects										
H forbids:	0–2/8	0–3/7	2.5	3.5	60%	120	3.2	4.9	54%	111
	3–5/8	4–6/7	2.9	3.9	45%	204	3.8	6.1	28%	240
	6–8/8	7/7	3.9	5.7	24%	269	4.6	7.2	21%	186
Restaurants, Movies, Parties										
W goes occasionally, frequently to:	0/3		4.1	5.6	21%	249	4.7	7.1	22%	247
	1/3		2.9	4.3	48%	239	4.1	6.5	22%	130
	2–3/3		2.1	3.0	56%	105	2.7	4.8	51%	159
Non-Home Centered Leisure										
Number NHC:	0/4		3.8	5.3	27%	368	4.6	7.0	21%	241
	1/4		2.7	3.8	53%	133	3.5	6.0	31%	184
	2–4/4		2.0	3.0	60%	92	3.2	5.1	52%	112
Size of World										
	Small		3.9	5.6	23%	225	4.3	7.1	11%	151
	Medium		3.1	4.4	43%	245	4.2	6.6	26%	145
	Large		2.4	3.3	57%	123	3.5	5.5	46%	242
Total			3.3	4.6	38%	593	3.9	6.3	31%	537

00035

Table 10

Live Births, Expected Births and Ever Used Family Planning by Wife's Place of Birth and Education and Husband's Income for Fecund Women Under 45 for Ankara and Mexico City

Background Variables		Ankara				Mexico City			
		Live Bir.	Exp. Bir.	Ever Used	N	Live Bir.	Exp. Bir.	Ever Used	N
Wife's place of birth*									
city	city	2.4	3.6	50%	243	3.4	5.6	39%	305
town	town	3.1	4.3	46%	114	4.5	7.0	19%	173
village	"smaller"	4.2	5.8	22%	236	4.9	7.5	24%	59
Wife's education									
0, illit.	0 yrs.	4.6	6.1	21%	203	5.1	7.9	10%	120
0, lit.	1–5 yrs.	3.7	4.9	36%	61	5.0	7.3	19%	145
1–5 yrs.	6 yrs.	2.8	4.2	43%	202	3.6	5.9	32%	95
6–11 yrs.	7–9 yrs.	2.1	3.0	59%	68	2.3	4.5	52%	95
12 + yrs.	10 + yrs.	1.6	2.5	63%	59	2.6	4.4	57%	81
Husband's monthly income									
– $50	– $96	4.1	5.9	19%	181	4.3	7.0	12%	196
$50–69	$96–159	3.3	4.7	31%	138	4.4	7.0	20%	151
$70–139	$160–399	3.0	4.1	47%	182	3.1	4.9	55%	137
$140 –	$400 –	2.2	2.9	70%	92	3.4	4.9	67%	53
Total		3.3	4.6	38%	593	3.9	6.3	31%	537

* The city, town ,village distinction is very clear in the minds of Turkish respondents. In Mexico, the structural hierarchy is more ambiguous in fact and in the minds of respondents.

00036

Table 11

Etas Between Measures of Fertility and Selected Independent Variable Indexes for Fecund Women Under 45 for Ankara and Mexico City

	Ankara			Mexico City		
Selected Independent Variables	Live Bir.	Exp. Bir.	Ever Used	Live Bir.	Exp. Bir.	Ever Used
Wife's place of birth	.36	.40	.27	.21	.27	.21
Wife's education	.48	.51	.31	.40	.49	.39
Husband's income	.30	.41	.35	.20	.36	.45
Power index	.28	.34	.32	.17	.24	.32
Sex role segregation attitudes index	.30	.35	.30	.12	.21	.30
Forbids or strongly objects index	.28	.39	.29	.18	.28	.26
Restaurants, movies, parties index	.35	.39	.30	.29	.35	.27
Non-home centered leisure index	.33	.38	.29	.22	.29	.27
Size of world index	.27	.35	.27	.13	.26	.31

Table 12

Correlations* Between Background Variables and Selected Indexes for Fecund Women Under 45 for Ankara and Mexico City

	Background Variables					
	Ankara			Mexico City		
Index Variables	WPB	WE	HI	WPB	WE	HI
Power Index	.42	.55	.46	.20	.43	.35
Sex role segregation attitudes index	.36	.50	.40	.07	.40	.29
Forbids or strongly objects index	.50	.55	.55	.17	.42	.39
Restaurants, movies, parties index	.47	.56	.50	.20	.54	.50
Non-home centered leisure index	.40	.56	.46	.24	.43	.34
Size of world index	.42	.51	.45	.20	.43	.35

* Numeric values assigned (1, 2 ... K) to the K categories shown in Tables 9 and 10. All correlations are in the "correct" direction so signs have been eliminated to avoid confusion.

000337

Table 13

Adjusted Means for Expected Births and Ever Used Family Limitation by Selected Indexes for Fecund Women Under 45 for Ankara and Mexico City

	Adjusted Means* for:							
	Criteria		Ankara			Mexico City		
Selected Indexes:	Ankara	M.C.	Expected Births	Ever Used	N	Expected Births	Ever Used	N
Husband's Power								
H decides:	0–1/5	0–1/5	4.5	47%	202	6.3	41%	178
	2–3/5	2/5	4.8	39%	192	6.3	28%	133
	4–5/5	3–5/5	4.6	28%	199	6.3	24%	225
Sex Segregation Attitudes								
W agrees to:	0–2/5	0–1/4	4.1	52%	105	6.1	45%	100
	3–4/5	2/4	4.6	38%	306	6.4	27%	163
	5/5	3–4/4	4.9	30%	182	6.2	28%	275
Forbids or Strongly Objects								
H forbids:	0–2/8	0–3/7	4.4	47%	120	5.8	38%	111
	3–5/8	4–6/7	4.4	39%	204	6.2	28%	240
	6–8/8	7/7	4.9	34%	269	7.0	30%	186
Restaurants, Movies, Parties								
W goes occas.-freq. to:	0/3		5.0	29%	249	6.5	32%	247
	1/3		4.5	46%	239	6.4	24%	130
	2–3/3		4.2	42%	105	5.7	34%	159
Non-Home Centered Leisure								
Number NHC:	0/4		4.8	34%	368	6.5	28%	241
	1/4		4.5	47%	133	6.2	28%	184
	2–4/4		4.2	45%	92	5.8	41%	112
Size of World								
	Small		4.9	32%	225	6.4	21%	151
	Medium		4.5	41%	245	6.3	29%	145
	Large		4.3	53%	123	6.1	38%	242
Total			4.6	38%	593	6.3	31%	537

* Multiple Classification Analysis used to obtain the adjusted means. Adjusted Means represent the grand mean plus the net effects from the index categories *after* adjustment for the net effects of wife's place of birth and education and husband's income.

00038

Table 14

Expected Births and Ever Used Family Limitation by Background Characteristics and Extensiveness of Role Index for Fecund Women Under 45 in Ankara

	Total Expected Births					Ever Used Family Limitation					
	Grand Mean	Actual Mean	Gross* Deviation	Net* Effect	Resid.* Effect	Grand Mean	Actual Mean	Gross* Deviation	Net* Effect	Resid.* Effect	N
Wife's place of birth											
city	4.6	3.6	−1.0	−0.2	−0.8	38%	50%	+12%	− 1%	+13%	243
town	4.6	4.3	−0.3	−0.2	−0.1	38%	46%	+ 8%	+ 7%	+ 1%	114
village	4.6	5.8	+1.2	+0.3	−0.9	38%	22%	−16%	− 3%	−13%	236
Wife's education											
0, illiterate	4.6	6.1	+1.5	+0.8	−0.7	38%	21%	−17%	+ 2%	−19%	203
0, literate	4.6	4.9	+0.3	−0.1	+0.4	38%	36%	− 2%	+10%	−12%	61
1–5 years	4.6	4.2	−0.4	−0.2	−0.2	38%	43%	+ 5%	+ 1%	+ 4%	202
6–11 years	4.6	3.0	−1.6	−0.7	−0.9	38%	59%	+21%	− 6%	+27%	68
12 + years	4.6	2.5	−2.1	−1.1	−1.0	38%	63%	+25%	−12%	+37%	59
Husband's monthly income											
<$50	4.6	5.9	+1.3	+0.2	+1.1	38%	19%	−19%	− 8%	−11%	181
$50–69	4.6	4.7	+0.1	−0.1	+0.2	38%	31%	− 7%	− 5%	− 2%	138
$70–139	4.6	4.1	−0.5	0.0	−0.5	38%	47%	+ 9%	+ 2%	+ 7%	182
$140 +	4.6	2.9	−1.7	−0.3	−1.4	38%	70%	+32%	+18%	+14%	92
Extensiveness of role index											
0–1 (trad.)	4.6	6.2	+1.6	+0.8	+0.8	38%	14%	−24%	−19%	− 5%	118
2–3	4.6	5.6	+0.8	+0.5	+0.3	38%	25%	−13%	−11%	− 2%	131
4–5	4.6	4.8	+0.2	+0.1	+0.1	38%	35%	− 3%	− 4%	+ 1%	101
6–7	4.6	3.9	−0.7	−0.4	−0.3	38%	47%	+ 9%	+ 6%	+ 3%	101
8–9	4.6	3.0	−1.6	−0.8	−0.8	38%	62%	+24%	+20%	+ 4%	87
10–12 (mod.)	4.6	2.7	−1.9	−0.9	−1.0	38%	75%	+37%	+33%	+ 4%	55
Total	4.6	4.6	0	0	0	38%	38%	0	0	0	593

* The gross deviation (difference between category mean and the grand mean) is decomposed into:
Net Effect – the net contribution from being in the category, after adjustment for the distribution of the respondents in the category on all other independent variables in the system.
Residual Effect – the difference between the gross deviation and the Net Effect, representing the contribution from the distribution of the category respondents on all other variables.

000039

Table 15

Expected Births and Ever Used Family Limitation by Background Characteristics and Extensiveness of Role Index for Fecund Women Under 45 in Mexico City

	Total Expected Births					Ever Used Family Limitation					
	Grand Mean	Actual Mean	Gross* Deviation	Net* Effect	Resid.* Effect	Grand Mean	Actual Mean	Gross* Deviation	Net* Effect	Resid.* Effect	N
Wife's place of birth											
city	6.3	5.6	−0.7	−0.2	−0.5	31%	39%	+ 8%	+ 2%	+ 6%	305
town	6.3	7.0	+0.7	+0.3	+0.4	31%	19%	−12%	− 4%	− 8%	173
smaller	6.3	7.5	+1.2	−0.3	+0.9	31%	24%	− 7%	+ 2%	− 9%	59
Wife's education											
0 years	6.3	7.9	+1.6	+1.1	+0.5	31%	10%	−21%	− 2%	−19%	120
0–5 years	6.3	7.3	+1.0	+0.8	+0.2	31%	19%	−12%	− 2%	−10%	145
6 years	6.3	5.9	−0.4	−0.4	0.0	31%	32%	+ 1%	− 1%	+ 2%	95
7–9 years	6.3	4.5	−1.8	−1.2	−0.6	31%	52%	+21%	+ 7%	+14%	95
10+ years	6.3	4.4	−1.9	−1.1	−0.8	31%	57%	+26%	− 2%	+28%	81
Husband's monthly income											
<$96	6.3	7.0	+0.7	−0.2	+0.9	31%	12%	−19%	−12%	− 7%	196
$96–159	6.3	7.0	−0.7	+0.5	+0.2	31%	20%	−11%	− 8%	− 3%	151
$160–399	6.3	4.9	−1.4	−0.4	−1.0	31%	55%	+24%	+16%	+ 8%	137
$400+	6.3	4.9	−1.4	−0.1	−1.3	31%	67%	+36%	+24%	+12%	53
Extensiveness of role index											
0–2 (trad.)	6.3	7.5	+1.2	+0.3	+0.9	31%	12%	−19%	−14%	− 5%	120
3–4	6.3	7.2	+0.9	+0.5	+0.4	31%	20%	−11%	− 4%	− 7%	129
5–6	6.3	6.3	0.0	0.0	0.0	31%	27%	− 4%	− 1%	− 3%	102
7–8	6.3	4.9	−1.4	−0.4	−1.0	31%	51%	+20%	+ 8%	+12%	88
9–12 (mod.)	6.3	4.6	−1.7	−0.7	−1.0	31%	60%	+29%	+15%	+14%	98
Total	6.3	6.3	0	0	0	31%	31%	0	0	0	537

* The gross deviation (difference between category mean and the grand mean) is decomposed into: Net Effect – the net contribution from being in the category, after adjustment for the distribution of the respondents in the category on all other independent variables in the system.
Residual Effect – the difference between the gross deviation and Net Effect, representing the contribution from the distribution of the category respondents on all other variables.

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Table 16

Unadjusted and Adjusted Means for Expected Births and Ever Used Family Limitation by "Other" Selected Modernism Indexes for Fecund Women Under 45 in Ankara and Mexico City

Other Modernism Indexes**			Unadjusted and Adjusted* Means for:									
			Ankara					Mexico City				
			Exp. Bir.		Ever Used			Exp. Bir.		Ever Used		
Ankara	M.C.		Un-Adj.	Adj.	Un-Adj.	Adj.	N	Un-Adj.	Adj.	Un-Adj.	Adj.	N
Wife's religiosity:												
0/2	0–1/5	(Mod.)	3.8	4.5	54%	42%	54	6.5	6.1	29%	35%	125
1/2	2/5		4.2	4.5	42%	38%	303	6.8	6.7	26%	28%	122
2/2	3–5/5	(Trad.)	5.4	4.8	30%	38%	236	5.9	6.1	33%	30%	289
Husband's religiosity												
0/3	0–1/5	(Mod.)	3.6	4.5	59%	46%	74	6.2	6.1	30%	33%	265
1/3	2/5		3.9	4.3	39%	35%	193	6.3	6.4	25%	33%	127
2–3/3	3–5/5	(Trad.)	5.3	4.9	33%	38%	326	6.3	6.3	29%	25%	146
Media exposure												
0–1/5	0–2/6	(Trad.)	6.0	5.3	19%	24%	217	7.1	6.2	16%	26%	231
2–3/5	3–4/6		4.5	4.5	39%	39%	180	6.0	6.3	32%	27%	190
4–5/5	5–6/6	(Mod.)	3.2	4.0	59%	54%	196	4.8	6.3	59%	43%	116
Modern objects												
0–1/5	0–3/8	(Trad.)	5.1	4.4	22%	31%	246	7.4	6.5	8%	20%	168
2/5	4–5/8		5.3	5.2	41%	42%	176	6.6	6.3	25%	29%	160
3–5/5	6–8/8	(Mod.)	3.3	4.4	59%	45%	171	5.0	6.0	54%	42%	208
Kin-marriage												
0–1/5	0/2	(Mod.)	3.6	4.2	47%	39%	154	6.2	6.2	35%	33%	344
2/5	1/2		4.6	4.6	40%	39%	210	6.6	6.3	16%	24%	49
3–5/5	2/2	(Trad.)	5.3	4.9	31%	37%	229	6.3	6.3	25%	29%	144
Home production												
0–1/6	0–1/5	(Mod.)	4.2	4.3	37%	34%	136	5.7	5.7	37%	35%	101
2–4/6	2–3/5		4.7	4.6	39%	40%	332	6.4	6.3	30%	31%	297
5–6/6	4–5/5	(Trad.)	5.0	5.1	37%	38%	125	6.4	6.6	30%	29%	140
Total			4.6	4.6	38%	38%	593	6.3	6.3	31%	31%	537

* Multiple Classification Analysis used to obtain the adjusted means. Adjusted Means represent the grand mean plus the net effects from the index categories *after* adjustment for the net effects of wife's place of birth and education and husband's income.

** The full array of questions for each index is given in the Appendix. Each question was dichotomized and the indexes created by summing the 0–1 values. The numbers listed, such as 0–1/5 modern objects mean that the respondent reported ownership of none or one of the five objects, etc.

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Appendix I

Questions from Turkish and Mexican Schedules

The Ankara and Mexico City schedules were made as similar as possible, given the cultural differences from the two settings. The entire schedule required about one hour and ten minutes to administer. Each schedule was divided into five segments: A. Household listing (5 minutes), B. Kinship section (15 minutes), C. Modernism, miscellaneous items section (20 minutes), D. Marriage-Fertility section (20 minutes), E. Census data section (10 minutes). The questions shown below are numbered as they appeared in the schedules, to give the reader some idea of their placement. The items contained in the several indexes shown in the report are reproduced below. I have tried to estimate the interview time (minutes) consumed for each index.

Index	Time	Style		Ankara		Mexico City
Spare time activities**	1/2	Open ended	C1.	Aside from visiting friends and relatives, what kinds of things do you do in the day or evening, when you have some free time?	C1.	Same as Ankara
Restaurants, movies and parties**	1	Closed	C8.	Now I would like to read you a list of activities and I would like you to tell me how often you and your husband do these things either alone or together	C8.	Same as Ankara
			C8a.	Go to a restaurant	C8a.	Same
			C8b.	Go to movies	C8b.	Same
			C8c.	Go to parties	C8c.	Go to reunions
Media (includes item 8b)	1	Closed	C8d.	Read newspapers	C8d.	Same
			C8e.	Listen to the radio	C8e.	Same
			—		C8f.	Watch television
			C9.	During the past month have you read any magazines?	C9.	Same
			C10.	During the past month have you read any books?	C10.	Same
Sex Segregation**	1–2	Closed	C11.	Now I would like to get your opinion on some matters concerning family life. I will read you some statements and I would like you to tell me whether you strongly agree, agree, disagree, strongly disagree. The first one is:	C11.	Same as Ankara

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Index	Time	Style		Ankara		Mexico City
			C11a.	Most of the important decisions in the life of the family should be made by the man of the house.	C11a.	Same
			C11b.	There is some work that is men's and some that is women's and they shouldn't be doing each others.	C11b.	Same
			C11c.	. . . and how about the saying: If you leave a girl by herself she either marries a drummer or a piper.		
			C11d.	A wife should *not* expect her husband to help around the house after he has come home from a hard days work.	C11d.	Same
			C11e.	It is perfectly alright for men to go out alone about as often as they want.	C11e.	Same
Forbids or strongly objects**	1	Closed	C12.	Many husbands forbid their wives to do certain things. Does your husband forbid you to do any of these things?	C12.	Many husbands strongly object to their wives doing certain things. Does your husband strongly object to any of these things?
			C12a.	to wear short sleeve dresses	C12a.	to talk to men your husband doesn't know
			C12b.	to sit together with men during visits to your home	C12b.	to visit women your husband doesn't know
			C12c.	to go shopping by yourself	C12c.	to go to the movies alone
			C12d.	to talk to men your husband doesn't know	C12d.	to go to fiestas by yourself
			C12e.	to go without a scarf or head covering	C12e.	to dance with other men at fiestas you both go to
			C12f.	to visit women your husband doesn't know	C12f.	to have a few drinks
			C12g.	to go to the matinee at the movies alone	C12g.	to wear clothes that catch the eye
			C12h.	to go to parties by yourself	—	

Index	Time	Style		Ankara		Mexico City
Husband power**	1–2	Closed	C13.	In most families, either the husband or the wife has the most say about some decisions, although they may talk it over first. I will read some items to you and I would like you to tell me whether your husband almost always decides, your husband usually decides, you usually decide or you almost always decide.	C13.	Same as Ankara
			C13a.	For instance, who usually has the most say about which couples you see most often?	C13a.	Same
			C13b.	. . . about which relatives you see?	C13b.	Same
			C13c.	. . . about the purchase of major household items?	C13c.	Same
			C13d.	. . . about how much money your family can afford to spend on food?	C13d.	Same
			C13e.	. . . about how money saved or earned is to be spent?	C13e.	Same
Home production	1–2	Closed	C14.	Some families buy most things ready made while others make things for themselves.	C14.	Same as Ankara
			C14a.	How many of the sweaters in your family were made at home?	C14a.	How many of the dresses or sweaters in your family are made at home?
			C14b.	How about the dresses you (or the children) wear – how many were made at home?	C14b.	How much of the *salsas* and *chiles* do you make at home?
			C14c.	And how about *tarhana* (soup) – how much is put up at home?	C14c.	How much of the *molé* do you make at home?
			C14d.	How much of the tomatoe paste you eat is made at home?	C14d.	How much of the laundry do you do yourself?
			C14e.	And pickles? How many of the pickles that you eat are put up at home?	-	
			C15.	Do you preserve or dry fruits or vegetables for the winter?	C15.	Do you make marmalade or compote during the seasons?

Index	Time	Style		Ankara		Mexico City
Size of world**	1/2	Open ended	C33.	What country do you think is the farthest place in the world from Turkey?	C48.	What country do you think is the farthest place in the world from Mexico?
Kin-Marriage	1–2	Open ended	D10.	For how long a period did you see your husband frequently prior to your engagement?	—*	
		Closed	D11.	How was your marriage arranged? Did you meet and marry your husband yourself or was he introduced to you and your marriage arranged?	—*	
		Closed	D12.	Is your husband a relative?	—*	
		Closed	D13.	Just after you got married, did you and your husband live alone, with a relative, or with others?	D13.	Same as Ankara
		Open ended	D13a.	(If lived with parents or relatives) How long did you live with (parents/relatives)?	D13a.	Same
Wife's religiosity	1	Closed	E16b.	How often do you pray?	E16a.	How often do you go to Mass?
			E16d.	Do you fast during *Ramazan*?	E16b.	How often do you take Communion?
					E16c.	How often do you pray outside of church?
					E16d.	What type of religious instruction have you had?
					E16e.	Have you ever gone to a religious school?
Husband's religiosity	1	Closed	E20b.	How often does he pray?	E20a.	How often does he . . .
			E20c.	How often does he go to the Mosque?	E20e.	(Same as wife questions)
			E20d.	Does he fast during *Ramazan*?		

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Index	Time	Style		Ankara		Mexico City
Modern objects	1	Closed	E25.	Does this house have a:	E25.	Does this house have a:
			E25a.	radio	E25a.	radio
			E25b.	refrigerator	E25b.	refrigerator
			E25c.	phonograph	E25c.	phonograph
			E25d.	washing machine	E25d.	blender
			E25e.	sewing machine	E25e.	sewing machine
					E25f.	television
					E25g.	automobile
					E25h.	gas stove

* Similar questions (with presumed appropriate wording changes) were asked in Mexico City but there was virtually no distribution. Parents almost uniformly "had little or no influence" on the choice of marriage partners and the number of cases in which the spouse was a relative, was trivial.

** Included in the index called extensiveness of wife's roles and attitudes.

Appendix II

Multiple Classification Analysis

Let us look at some data from Ankara, where the independent variables are education, income, and slum residence, with the dependent variable being actual number of live births for women over 45 or total expected births for women under 45. The dependent variable is a snapshot of what total live births might look like when all women complete their fertility. Multiple classification output looks like this:

	Mean Fertility	Gross Effect	Net Effect	Residual Effect	N
Education: low	5.313	+.967	+.627	+.340	386
high	3.451	—.895	— 581	—.314	417
Income: low	4.995	+.649	+.213	+.436	433
high	3.586	—.760	—.249	—.511	370
Slum	5.262	+.916	+.464	+.452	366
Non-slum	3.579	—.767	—.389	—.378	437
Total	4.346	–	–	–	803

The gross effect, the difference between the category mean and the actual mean, is made up of two components: 1. the net effect of the category independent of the other independent variables, and 2, the residual effect, representing the proportional distribution of category respondents, across all other combinations of categories of independent variables,multiplied by the net effects for those combinations of categories.

Suppose we focus on the net contribution of slum residence to fertility. The model says slum residence produces an increment of .464 children independent of the fact that slum residents have lower education and lower income and that these people have higher fertility. It also says that .452 of the difference between slum resident's fertility (5.262) and the grand mean (4. 346) may be specifically attributed to the difference between other characteristics (education, income) of slum and non-slum residents.

The MCA model treats categories of the independent variables as dummy variables in regression analysis using a least squares procedure that minimizes the squared deviations between Y_p (predicted fertility) and Y (actual fertility) where:

$$Y_p = Y + a_i + b_j + c_k$$

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in which Y is the grand mean, a_i is the net effect from category i of variable a, b_j is the net effect from category j of variable b, c_k is the net effect from category k of variable c.
The weighted sum of the net effects for any variable is constrained to zero ($\Sigma n_i a_i = 0$).
In our example, looking at the net effects for slum residence, you will note that:

$$366 \times .464 + 437 \times -.389 = 0 \text{ (within rounding)}$$

There are implicit predictions for cell means in MCA analysis:

$$\bar{Y}_{p\,ijk} = Y + a_i + b_j + c_k$$

The predicted mean for slum residents with low income and low education is:

$$4.346 + .464 + .213 + .627 = 5.650$$

which is the grand mean plus all the net effects from the particular combination of categories. Since we have three independent variables, each dichotomized, we have eight predicted cell means. These predicted cell means can be viewed as a regression surface. Given the linear, additive model being used, MCA minimizes the squared deviations between the eight pairs of actual and predicted means.
There are several publications providing considerable information about the iterative process used, tests for interaction and several other dimensions of the procedure, the most detailed one being: F. M. Andrews, J. N. Morgan, J. A. Sonquist, L. Klem, *Multiple Classification Analysis: A Report on a Computer Program for Multiple Regression Using Categorical Predictors*. Ann Arbor, Institute for Social Research, 1973.

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WORLD FERTILITY SURVEY

OCCASIONAL PAPERS

Editor Ken Williams

1. Fertility and Related Surveys	William G. Duncan
2. The World Fertility Survey: Problems and Possibilities	J. C. Caldwell
World Fertility Survey Inventory: Major Fertility and Related Surveys 1960–73	
3. Asia	Samuel Baum, Kathleen Dopkowski, William G. Duncan and Peter Gardiner
4. Africa	
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6. Europe, North America and Australia	
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8. Community-Level Data in Fertility Surveys	Ronald Freedman
9. Examples of Community-Level Questionnaires	Ronald Freedman
10. A Selected Bibliography of Works on Fertility	György T. Acsádi
11. Economic Data for Fertility Analysis	Deborah S. Freedman (with Eva Mueller)
12. Economic Modules for use in Fertility Surveys in Less Developed Countries	Deborah S. Freedman and Eva Mueller
13. Ideal Family Size	Helen Ware
14. Modernism	David Goldberg

Copies are also available of "Demographic Data Collection" by William Seltzer. This is an Occasional Paper of the Population Council which was written, at the request of the ISI, as a background paper for the first ad hoc TAC meeting.

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